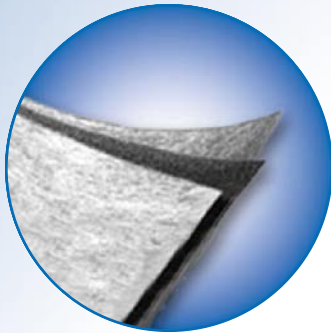


# PLEKX® FILTRATION PRODUCTS



**Graver Technologies**

## FEATURES & BENEFITS:



### *What is “PLEKX®”?*

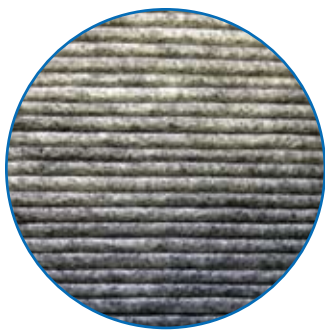
**PLEKX®** is a highly uniform, immobilized layer of extruded powder or particles designed for adsorption, supported by a flexible substrate and covered by a protective sheet. **PLEKX®** technology is a cost-effective method of producing composites from almost any combination of particles, carrier and cover sheet. Although we currently focus our production on activated coconut shell carbon, **PLEKX®** can use many different types of adsorbents. **PLEKX®** is **patent protected** and under exclusive license to **Graver Technologies**.

### *High Percentage of Active Ingredient*

The ratio of binder to active ingredient in **PLEKX®** is so small that the active ingredient is usually 82%-86% of the total weight of the composite. As a result, **PLEKX®** technology delivers a maximum amount of active material rather than a large amount of binder and fiber, making it superior to competitive forms of adsorbent composites.

### *Low Fines Release*

**PLEKX®** technology prevents the release of fine particles by immobilizing them into a solid-state extrusion with its own integrity. The resulting media composite is flexible and easily converted into finished filter devices, whether flat sheet, wrapped or pleated configurations.



### *No Channeling or Settling*

Solid-state extrusion produces a solid sheet of particles rigidly bonded to each other and to the adjacent carrier and cover sheet. The resulting bed of particles cannot shift or settle during transport, handling or operation.

### *Low Binder Content*

The character and physical properties of binder used, together with the **PLEKX®** processing equipment and conditions, assures that the active ingredient is delivered intact. The high permeability allows the active ingredient to be fully exposed to the contaminants targeted for removal.

## *Why PLEKX®?*

**PLEKX®** technology is so unique and advanced that it has become the most economical yet effective adsorbent media in the industry. The performance and technical benefits of **PLEKX®** are made possible by the ability of the extrusion process to produce a superior adsorbent product.

*uniform*  
*reproducible*  
*efficient*  
*reliable*  
*cost effective*

The carbon-binder formula and the advanced processing design produce an exceptional and highly customizable product. Whether the product is pleated or in flat sheet format, or 200 gsm versus 500 gsm in weight, it can fit into countless applications to meet a variety of adsorbent needs.



## APPLICATIONS:

### *Source Capture (Medical and Surgical)*

**Graver Technologies** produces a variety of filters designed for use in removal and/or reduction of multiple odor, gas, fume and chemical contaminants in both doctors' offices and surgical suites. With the emergence of in-office laser surgery, odors of burning tissue have become a particular nuisance. **PLEKX®** composite media is easily configured into filter devices designed to vacuum and adsorb these odors and particulates at the source. Filters can also be used for in-office decontamination chambers, sterilization and disinfection devices, removing odors created for example by **peracetic acid, hydrogen peroxide, and acetic acid.**



### *Personal Protection*

**PLEKX®** has been proven to be highly effective in personal protection devices, such as breathing masks and critical cabin air filters. The **PLEKX®** technology allows for the use of multiple particulate chemistries and catalysts. Impregnated carbons, as well as zeolites, sodium bicarbonate, magnesium dioxide, and dessicants can be used for hazardous/chemical environments and military applications. Our patented **PLEKX®** technology offers superior performance due to the combination of high permeability and high adsorption efficiencies.

### *Room Air Cleaners and Vacuum Filters*

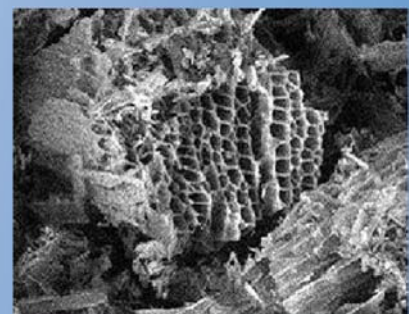
**Graver Technologies** also produces a wide array of filters for general odor reduction applications. **PLEKX®** products have been successfully integrated into room air cleaners, vacuums and kitchen exhaust fans to remove odors generated for example by cooking, smoking, pets and bathrooms. They can also be combined to work with HEPA filtration in many room air cleaning units, vacuum systems, as well as configured to fit in central air conditioning units where acceptable. And, **PLEKX®** products are used for general cabin air filtration in cars and trucks, as well as off-road equipment such as cranes, earth movers, loaders and dozers, adsorbing odors and hazardous contaminants in a variety of environments.



## “PLEKX® 101”

**PLEKX® uses coconut shell activated carbon.** It is a form of carbon that has been processed to make it extremely porous, providing a very large surface area available for adsorption or chemical reactions **Just 1 gram of activated carbon has a surface area in excess of 1,100 m<sup>2</sup> (about one fifth the size of a football field).**

**Adsorption** is the adhesion of atoms, ions, biomolecules or molecules of gas, liquid, or dissolved solids to a surface through some kind of attraction. This process creates a film of the adsorbate (the molecules or atoms being accumulated) on the surface of the adsorbent.



# THE GRAVER ADVANTAGE

Graver Technologies is a US based company serving the industrial filtration, coalescing, separation and purification needs of companies around the globe. Established over three decades ago, Graver Technologies develops, manufactures and markets a wide array of products and services for the power generation, industrial, food and beverage, drinking water, pharmaceutical and chemical markets. Our products are used to efficiently remove particulate and soluble contaminants from a wide range of gases, air and fluids. At Graver Technologies, we strive to understand the needs of our customers and specialize in providing innovative solutions for all their processing needs.

*We are committed to total customer satisfaction.*

Graver Technologies is ISO 9001:2008 certified and operates under a strict quality management system focused on continuous improvement. Graver Technologies is headquartered in Glasgow, Delaware and has additional manufacturing and marketing facilities in Honeoye Falls, New York and Newark, New Jersey.

Graver Technologies, LLC is a Marmon Water/Berkshire Hathaway company.

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This product is made by or covered by United States patents, US patent numbers 5,792,513; 6,077,588; 6,355,330; 6,485,813; 6,550,622; 6,719,869; 6,797,167; 7,238,403; applicable US patent applications; foreign patents and applicable foreign patent applications. This product's performance and use is defined and limited by the manufacturer's product data sheet.

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